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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/289,789	04/09/1999	ALAN T. RUBERG	83000.1102:P	9041

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EXAMINER
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ZHEN, LI B

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 12/11/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

APG

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/289,789	RUBERG, ALAN T.	
	Examiner	Art Unit	
	Li B. Zhen	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 36-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 36-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant amended the specification to claim priority to Wall as a continuation-in-part pursuant to 35 U.S.C. § 120. The examiner acknowledges the priority claim and notes that only claims in a continuation-in-part application that is directed *solely* to subject matter adequately disclosed in the parent non-provisional application is entitled to the benefit of the filing date of the parent non-provisional application (MPEP § 201.11, Section VI).

### ***Claim Objections***

2. Claim 48 is objected to because of the following informalities: claim 48 (line 1) refers to the apparatus of claim 48. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 36 – 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,546,419 to Humpleman in view of U.S. Patent No. 5,974,444 to Konrad.

As to claim 1, Humpleman teaches, a device manager (Network Object Request Broker such as Home Network Object Request Broker, HNORB 79, Fig. 19; column 16, lines 39 – 61) for providing a device driver (source server device 14, includes a control

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program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42) for a device (server devices 14, Fig. 3; column 5, lines 5 – 13) comprising:

- a device service (remote service application; column 11, line 50 – column 12, line 10) for requesting a device;

- a remote bus proxy (proxy through a translation server) for communicating with a client device (sending device 120 can send the data to the receiving device 122 by proxy through a translation server 124, Fig. 23; column 27, lines 13 – 32); and

- a remote device driver (control program) coupled to the client device (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42).

Humpleman teaches controlling access to remote devices (the HNORB 79 and the IL 80, can be connected directly to the Internet, such that selected home devices can be accessed from outside of a local home network 10...authorized users with the appropriate stream encryption can access a DVD changer in the user's primary home; column 16, lines 51 – 61) but does not explicitly disclose controlling communications between the device server and remote device driver and approving requests to read or send data to remote devices and control accessibility to the remote devices.

However, Konrad teaches a device manager (Service Provider: owner or manager of a desired service; col. 7, lines 48 – 51) for controlling communications between the device service and the remote device driver (enabling the Service Provider to retain control over who initiates a connection to the Desired Utility Service and

receives its benefits; col. 12, lines 13 – 28), approving requests to read or send data to remote devices and controlling accessibility to the remote devices (boundary created to prevent or limit incoming request to particularly authorized requests or requests from an authorized Requester; col. 7, lines 12 – 15).

It would have been obvious to a person of ordinary skilled in the art at the time of the invention to apply the teaching of controlling communications between the device server and remote device driver and approving requests to read or send data to remote devices and control accessibility to the remote devices as taught by Konrad to the invention of Humpleman because this provides greater control for security and filtering purposes and lessens the chance that an untrained Client may cause disruption to the service (col. 6, lines 52 – 57 of Konrad).

As to claim 37, Humpleman teaches providing access to one or more remote devices over a network, comprising:

a remote device driver (control program) coupled to one or more devices (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42);

one or more driver services (remote service application; column 11, line 50 – column 12, line 10) configured to remotely control one or more of the devices (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42), wherein the remote device driver tracks which of the one or more driver services communicates with which of the one or more devices (a session manager 36 with a

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user interface for displaying selection information for a user to select and control the server devices 14 SERVER1, SERVER2 and other server devices 14 such as SERVER3 and SERVER4, Fig. 9; column 8, lines 3 - 16); and

a device manager (HNORB) configured to register (register method) one or more of the driver services with the remote device driver to access one or more of the devices (a device 14 can remotely call a "register" method of HNORB to pass the device interface as one or more parameters; column 17, lines 10 - 15). As to a device manager that approve requests to read data from one or more of the devices, see the rejection to claim 1 above.

As to claim 53, Humpleman teaches providing access to one or more remote devices over a network, comprising:

receiving by a device manager (Network Object Request Broker such as Home Network Object Request Broker, HNORB 79, Fig. 19; column 16, lines 39 - 61) of a device request from a driver service (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 - 42);

registering (register method) by the device manager (HNORB) of the driver service with a remote device driver (a device 14 can remotely call a "register" method of HNORB to pass the device interface as one or more parameters; column 17, lines 10 - 15); and

communicating by the driver service (remote service application; column 11, line 50 - column 12, line 10) with a remote device via the remote device driver (source

server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42). As to controlling accessibility to the remote device, see the rejection to claim 1 above.

As to claim 64, Humpleman teaches providing access to one or more remote devices over a network, comprising:

one or more remote devices (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42);

a terminal locally coupled to the one or more remote devices, the terminal comprising a first processor and first memory, the first memory comprising first computer readable programming code for execution by the first processor (server device itself may reduce the processing and storage requirements of the client devices 12 in networks with several server devices 14; column 5, lines 25 – 33), wherein the first computer readable program code comprises a remote device driver coupled to the one or more remote devices (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42); and

a server coupled to the terminal over a network, the server comprising a second processor and second memory, the second memory comprising second computer readable program code for execution by the second processor (server device itself may reduce the processing and storage requirements of the client devices 12 in networks with several server devices 14; column 5, lines 25 – 33), wherein the second

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computer readable program code comprises (server devices 14, Fig. 3; column 5, lines 5 – 13):

one or more driver services (remote service application; column 11, line 50 – column 12, line 10) configured to remotely control one or more of the devices (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42), wherein the remote device driver tracks which of the one or more driver services communicates with which of the one or more devices (a session manager 36 with a user interface for displaying selection information for a user to select and control the server devices 14 SERVER1, SERVER2 and other server devices 14 such as SERVER3 and SERVER4, Fig. 9; column 8, lines 3 - 16); and

a device manager (HNORB) configured to register (register method) one or more of the driver services with the remote device driver to access one or more of the remote devices (a device 14 can remotely call a "register" method of HNORB to pass the device interface as one or more parameters; column 17, lines 10 – 15). As to approving requests to read and send data from the one or more remote devices, see the rejection to claim 1 above.

As to claims 36 and 70, Humpleman teaches device manager is further adapted to discover the device service (HNORB 79 includes a software agent for use by one device 14 to discover the existence of other devices 14 connected to the network 10, Fig. 19; column 16, lines 44 – 50), enable the device service to use the remote devices via the remote device driver (HNORB software agent organizes device names into a



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naming hierarchical tree structure, organizes device interfaces into said searchable Interface Library, and provides device interfaces to a device requesting interface information; column 16, lines 46 – 50), notify other device services of an availability of the remote devices (HNORB and IL can provide the controller device A with a reference to the controlled device B, whereby the device A can generate remote calls to the device B native functions just as calls to the local device A native function; column 18, lines 17 – 28), and track a connection of the remote devices with the device service (device 14 and the HNORB&IL can establish a point-to-point Transmission Control Protocol, TCP, or User Datagram Protocol, UDP, connection for registration, interface request and fetch, and device lookup services; column 17, lines 2 – 10).

As to claim 38, Humpleman teaches the one or more driver services (remote service application; column 11, line 50 – column 12, line 10) and the device manager reside (Network Object Request Broker such as Home Network Object Request Broker, HNORB 79, Fig. 19; column 16, lines 39 – 61) in a server domain (middleware layer 98 can be located in a third device 96 or in a separate control hub; column 16, lines 50 – 60) coupled across a network (home network 10, Fig. 19) to the remote device driver (control program) that resides in a desktop unit domain (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42).

As to claims 39 and 65, Humpleman as modified teaches a Human Interface Device (Local Host) for providing a user interface (Human Interface Service supports computer-human interaction between the Local Host and the user; col. 9, lines 13 – 22

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of Konrad) to operate the one or more devices (user manipulates the Human Interface Service to specify services desired; col. 9, lines 28 – 40 of Konrad) and a plurality of servers (Remote Host) for providing a plurality of computational services (col. 4, lines 21 – 28 of Konrad) removed from the HID (Host which supports the non-local functional components of a Remote Object system, including...one or more Desired Utility Services and Desired Utility Servers; col. 8, lines 40 – 65 of Konrad).

As to claims 40 and 66, Humpleman as modified teaches the computational services (col. 4, lines 21 – 28 of Konrad) comprise a computational power for the HID and a state maintenance for the HID (Starter Service...reports status, including termination, of the Remote Object Client, to the Starter Server; col. 12, lines 6 – 30 of Konrad).

As to claim 41, Humpleman as modified teaches the one or more devices are locally connected to the HID (remote host comprises a multiplicity of computer inter-operating together; col. 9, lines 5 – 22 of Konrad).

As to claims 42 and 43, Humpleman as modified teaches the one or more driver services (remote service application; column 11, line 50 – column 12, line 10 of Humpleman) and the device manager (Network Object Request Broker such as Home Network Object Request Broker, HNORB 79, Fig. 19; column 16, lines 39 – 61 of Humpleman) reside in a server domain (middleware layer 98 can be located in a third device 96 or in a separate control hub; column 16, lines 50 – 60 of Humpleman) coupled across a network (home network 10, Fig. 19 of Humpleman) to the remote device driver (control program) and wherein the remote device driver resides in a

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Human Interface Device for providing a user interface to operate the one or more devices (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42 of Humpleman). As to a Human Interface Device, see the rejection to claim 39 above.

As to claim 44, Humpleman teaches a bus device driver locally coupling the remote device driver to the one or more devices (communication link 16 can include a 1394 serial bus providing a physical layer for sending and receiving data between the various connected home devices; column 4, lines 40 – 46), and a bus proxy remotely (proxy through a translation server) coupling the one or more driver services to the remote device driver (sending device 120 can send the data to the receiving device 122 by proxy through a translation server 124, Fig. 23; column 27, lines 13 – 32).

As to claim 45, this is a combination of claims 41 and 42; see the rejection to claims 41 and 42 above.

As to claim 46, Humpleman as modified teaches a session manager configured to associate one or more sessions with one or more of the driver services (a dedicated data connection...for conveyance of Request among a multiplicity of Remote Host computers such that Request can be conveyed successfully from the Remote Object Client to a Desired Utility Service; col. 11, lines 33 – 39 of Konrad).

As to claims 47 and 58, Humpleman as modified teaches the device manager is further configured to enforce a device access policy (boundary) for registering the one or more driver services (boundary created to prevent or limit incoming request to

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particularly authorized requests or requests from an authorized Requester; col. 7, lines 12 – 15 of Konrad).

As to claim 48 (note the claim objection above), Humpleman teaches the device manager is further configured to locate the one or more devices and to maintain an inventory of the one or more devices and respective controlling driver services (HNORB and IL can provide the controller device A with a reference to the controlled device B, whereby the device A can generate remote calls to the device B native functions just as calls to the local device A native function; column 18, lines 17 – 28).

As to claims 49 – 51, 61 and 63, Humpleman as modified teaches notifying a first driver service of a loss of a network connection to a first device when an associated session of the HID ends (reports status, including termination, of the Remote Object Client, to the Starter Server; col. 12, lines 7 – 15 of Konrad).

As to claim 52, Humpleman as modified teaches the remote device driver comprises a filter for permitting and denying access by one or more of the driver services (boundary created to prevent or limit incoming request to particularly authorized requests or requests from an authorized Requester; col. 7, lines 12 – 15 of Konrad) and wherein the filter is provided by the device manager via the network (Server can now provide for greater control for security and filtering purposes; col. 6, lines 50 – 60 of Konrad).

As to claim 54, Humpleman as modified teaches sending device configuration information by the remote device driver to the device manager (reports status, including

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termination, of the Remote Object Client, to the Starter Server; col. 12, lines 7 – 15 of Konrad).

As to claim 55, Humpleman as modified teaches locally exposing the remote device to the remote device driver via a bus device driver (communication link 16 can include a 1394 serial bus providing a physical layer for sending and receiving data between the various connected home devices; column 4, lines 40 – 46 of Humpleman).

As to claim 56, Humpleman as modified teaches associating a session with the driver service via a session manager (connection manager; col. 12, lines 15 – 30 of Konrad), and associating the session with a Human Interface Device via an authentication manager (enabling the Service Provider to retain control over who initiates a connection to the Desired Utility Service and receives its benefits; col. 12, lines 13 – 28 of Konrad).

As to claim 57, see the rejections to claims 41 and 42 above.

As to claim 59, Humpleman as modified teaches maintaining in the remote device driver an association between the remote device and the driver service (distinguishes among the Remote Object based upon the identifier of the Desired Utility Service-Remote Object combination; col. 13, lines 5 – 15 of Konrad).

As to claim 60, Humpleman as modified teaches maintaining by the device manager of an inventory of devices located on a Human Interface Device and respective controlling driver services for the inventoried devices (HNORB and IL can provide the controller device A with a reference to the controlled device B, whereby the device A can generate remote calls to the device B native functions just as calls to the

local device A native function; column 18, lines 17 – 28 of Humpleman). As to a HID, see the rejection to claim 39 above.

As to claim 62, Humpleman as modified teaches the loss of the network connection to the remote device (Remote Object Client is terminated; col. 18, lines 22 – 36 of Konrad) is in response to the closing of an associated session by a user on a Human Interface device (Terminate Session Button; col. 13, lines 52 – 55 of Konrad). As to a HID, see the rejection to claim 39, above.

As to claim 67, see the rejection to claims 38 and 39 above.

As to claim 68, see the rejection to claims 42 and 45 above.

As to claim 69, Humpleman teaches the one or more driver services (remote service application; column 11, line 50 – column 12, line 10 of Humpleman) reside in the server (middleware layer 98 can be located in a third device 96 or in a separate control hub; column 16, lines 50 – 60 of Humpleman) and are separated from the terminal via a network (home network 10, Fig. 19 of Humpleman) and the terminal can only operate the one or more remote devices via the one or more driver services residing in the server domain (source server device 14, includes a control program 20 for controlling data stream source hardware 32 of the source server device 14, Figs. 4 and 8; column 8, lines 30 – 42 of Humpleman).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,926,636 to Lam teaches remote procedural call component management for a heterogeneous computer network.

U.S. Patent No. 6,311,228 to Ray teaches simplified communication with HID devices that allows client programs to receive HID data items in a consistent manner.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Li B. Zhen  
Examiner  
Art Unit 2126

lbz  
December 8, 2003



JOHN FOLLANSBEE  
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